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## ABSTRACT

A software system having a multi-layer architecture for controlling a hardware system including a latch layer, a hardware control layer, an access layer, and an orchestration layer. The latch layer includes a latch object for each of a set of control points of the hardware system. Each latch object provides a common interface in the software system for accessing the corresponding control point. The hardware control layer includes a hardware control object for each of a set of sub-portions of the hardware system. Each hardware control object coordinates accesses to the control points of the corresponding sub-portion through the latch layer. The access layer includes an access object for each of a set of groupings of the sub-portions. access object coordinates accesses to the corresponding grouping of the sub-portions. orchestration layer includes an orchestration object for each of a set of functional features of the hardware system. Each orchestration object provides a common interface in the software system for accessing a corresponding grouping of the access objects which are associated with the corresponding

Attorney Docket No.: 10004039

functional feature.